Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection

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Identification of Perinatal HIV Exposure (Updated August 11, 2011)

Panel's Recommendations:

- HIV testing early in pregnancy is recommended as standard of care for all pregnant women in the United States **(AII)**.
- Repeat HIV testing in the third trimester is recommended for women who have negative HIV antibody tests earlier in pregnancy if they are at high risk of HIV infection because of behavior or residence in a high-prevalence area **(AII)**.
- Women seen at labor with undocumented HIV status should undergo rapid HIV antibody testing, and women with a positive antibody test should initiate intrapartum antiretroviral (ARV) prophylaxis **(AII)**.
- If acute HIV infection is suspected in a pregnant woman, a virologic test (e.g., plasma HIV RNA assay) should be performed because serologic testing may be negative at this early stage of infection **(AII)**.
- Women who have not been tested for HIV before or during labor should undergo rapid HIV antibody testing during the immediate postpartum period or their newborns should undergo rapid HIV antibody testing. If the mother or infant is HIV antibody positive, infant ARV prophylaxis should be initiated as soon as possible and the mother advised not to breastfeed pending results of confirmatory HIV antibody testing **(AII)**.

Appropriate treatment of HIV-infected infants requires HIV-exposed infants to be identified as soon as possible, which can be best accomplished through the identification of HIV-infected women before or during pregnancy. Universal HIV counseling and voluntary HIV testing, including consent using an opt-out approach, are recommended as the standard of care for all pregnant women in the United States by the Panel, the U.S. Public Health Service (USPHS), the American Academy of Pediatrics, the American College of Obstetricians and Gynecologists, and the U.S. Preventive Services Task Force[1-6]. The opt-out approach requires that a pregnant woman be notified that HIV testing will be performed as part of routine care unless she chooses not to be tested for HIV[7]. All HIV testing should be performed in a manner consistent with state and local laws (http://www.nccc.ucsf.edu/consultation_library/state_hiv_testing_laws/).

Early identification of HIV-infected women is crucial for their health and for the care of their children, whether infected or not. Knowledge of antenatal maternal HIV infection enables:

- HIV-infected women to receive appropriate antiretroviral therapy (ART) and prophylaxis against opportunistic infections (OIs) for their own health;
- Provision of ARV chemoprophylaxis during pregnancy, during labor, and to the newborn to reduce the risk of HIV transmission from mother to child[8];
- Counseling of HIV-infected women about the indications for and potential benefits of scheduled cesarean delivery to reduce perinatal transmission of HIV[8-12];
- Counseling of HIV-infected women about the risks of HIV transmission through breast milk and advising against breastfeeding in the United States and other countries where safe alternatives to breast milk are available[13];
- Initiation of prophylaxis against *Pneumocystis jiroveci* pneumonia (PCP) in all HIV-exposed infants with indeterminate HIV infection status or who have documented HIV infection beginning at age 4-6 weeks[14]; and
- Early diagnostic evaluation of HIV-exposed infants to permit early initiation of ART in infected infants[2,15].

Repeat HIV Testing in the Third Trimester

Repeat HIV testing in the third trimester, preferably before 36 weeks gestation, is recommended for women with initially negative HIV antibody tests who are at high risk of HIV infection and may be considered for all pregnant women. A second HIV test during the third trimester is recommended for women who meet one or more of the following criterion:

- receive health care in jurisdictions with a high incidence of HIV or AIDS among women 15–45 years of age;
- receive health care in facilities in which prenatal screening identifies at least 1 HIV-infected pregnant woman per 1,000 women screened;
- are known to be at high risk of acquiring HIV (e.g., injection drug users or partners of injection drug users, exchange sex for money or drugs, are sex partners of HIV-infected persons, and have had a new or more than 1 sex partner during current pregnancy or diagnosis of a new sexually transmitted infection [STI] during pregnancy); and
- have signs or symptoms of acute HIV infection[3, 6, 16].

Women who declined testing earlier in pregnancy should have testing offered again during the third trimester. There is evidence that the risk of HIV acquisition is significantly higher during pregnancy than in the postpartum period[17]. If acute HIV infection is suspected, a virologic test (e.g., plasma HIV RNA assay) should be performed because serologic testing may be negative at this early stage of infection.

Rapid HIV Testing During Labor in Women with Unknown HIV Status

Use of rapid test kits or an expedited enzyme-linked immunosorbant assay (ELISA) to detect HIV antibodies is recommended to screen women who are seen at labor and have undocumented HIV status in order to identify HIV exposure in their infants[2-3, 6, 15]. Any hospital offering intrapartum care should have rapid HIV testing available and should have in place policies and procedures to assure that staff are prepared to provide patient education about rapid HIV testing, that appropriate ARV medications are available whenever needed, and that follow-up procedures for women found to be HIV infected and their infants are in place. Rapid tests have been found to be feasible, accurate, timely, and useful both in assuring prompt initiation of intrapartum and neonatal ARV prophylaxis and in reducing perinatal transmission of HIV[18]. Results of rapid tests can be obtained within minutes to a few hours and are as accurate as standard ELISA antibody testing[19-20]. A positive rapid HIV test result must be followed by a confirmatory test such as a Western blot or immunofluorescent antibody (IFA) assay; a standard ELISA should not be used as a confirmatory test for a rapid HIV antibody test[20]. A single negative rapid test does not need confirmation unless acute HIV infection is suspected, in which case a virologic test is necessary. The immediate initiation of ARV prophylaxis for prevention of mother-to-child transmission (PMTCT) of HIV is strongly recommended pending confirmation of an initial positive rapid HIV test[2, 5, 8, 15].

HIV Counseling and Testing During Postnatal Period

Women who have not been tested for HIV before or during labor should be offered rapid testing during the immediate postpartum period or their newborns should undergo rapid HIV antibody testing, with counseling and consent of the mother unless state law allows testing without consent[2-3, 8, 15]. Because neonatal ARV chemoprophylaxis should be initiated as soon as possible after birth, and no later than 12 hours after birth, to be effective in preventing mother-to-child transmission (MTCT)[21-22], use of rapid

HIV antibody assays or expedited ELISA testing to allow prompt identification of HIV-exposed infants is essential. It is strongly recommended that infant ARV prophylaxis be initiated while awaiting confirmatory testing results after an initial positive rapid test in the mother or the infant and that women with positive rapid HIV test results be advised not to initiate breastfeeding pending results of confirmatory testing. If the confirmatory test is negative, the infant ARV prophylaxis can be discontinued and the mother can initiate breastfeeding. Mechanisms should be developed to facilitate rapid HIV screening for infants who have been abandoned and are in the custody of the state.

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